ABSTRACT

A method and apparatus for distributing broadcast quality video (or similar timing critical data) in the home over a network that is also carrying IP traffic integrates non-IP video traffic with IP traffic in a seamless manner. The present invention provides a method and apparatus for creating a network with mixed traffic, *e.g.*, both timing critical traffic, such as MPEG type traffic, and IP traffic. The method transmits the timing critical data directly to a Media Access Control (MAC) layer and adds one or more specific functions to the Media Access Control to maintain timing restrictions of the timing critical data. The timing critical data can include an MPEG video data stream, and the one or more specific functions are then one or more MPEG specific functions. An exemplary embodiment of a method for transmitting timing critical data, such as MPEG video data or 1394 traffic including isochronous video data, includes transmitting the timing critical data directly to a MAC layer, maintaining a timing relationship of the timing critical data throughout the MAC layer to a scheduler, and using a single scheduler to schedule transmission of both the timing critical data and the Internet Protocol traffic.